

STATE OF NEVADA

Department of Conservation & Natural Resources

Jim Gibbons, Governor Allen Biaggi, Director

DIVISION OF ENVIRONMENTAL PROTECTION

Leo M. Drozdoff, P.E., Administrator

June 20, 2008

Notice of Decision

Water Pollution Control Permit Number NEV2007101

Canyon Resources Corporation

Reward-2 Project

The Nevada Division of Environmental Protection has decided to issue Water Pollution Control Permit NEV2007101 to Canyon Resources Corporation. This permit authorizes the construction, operation, and closure of approved mining facilities in Nye County. The Division has been provided with sufficient information, in accordance with Nevada Administrative Code (NAC) 445A.350 through NAC 445A.447, to assure the Division that the groundwater quality will not be degraded by this operation, and that public safety and health will be protected.

The permit will become effective July 5, 2008. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to Nevada Revised Statute (NRS) 445A.605 and NAC 445A.407. All requests for appeals must be filed by 5:00 PM, June 30, 2008, on Form 3, with the State Environmental Commission, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249. For more information, contact Rob Kuczynski, P.E., at (775) 687-9441 or visit the Bureau of Mining's website at http://ndep.nv.gov/bmrr/bmrr01.htm

One comment letter was received during the public comment period. The letter, dated June 6, 2008 was received electronically from Mr. John Hadder, Staff Chemist, Great Basin Resource Watch (GBRW) and included a technical review by Tom Myers, PhD; Hydrologic Consultant for GBRW. Division responses to Mr. Hadder and Mr. Myers comments are attached to this Notice of Decision.

NDEP acknowledges the assistance provided by Canyon Resources Corporation (Canyon) in addressing GBRW's concerns.

<u>GBRW Comment #1</u>: "There should be monitoring [of] the basin fill aquifer either using a downgradient water supply well or a transect 1.0 to 1.5 miles southwest of the site. If contamination is detected then Canyon Resources Corp. and the Nevada Department of Environmental Protection (NDEP) should plan to pump and treat, using the monitoring wells, the groundwater and put it back into the aquifer."

<u>NDEP Response</u>: A production well/make-up water well is located downgradient of the Reward-2 project site and will serve as a monitoring well for compliance demonstration purposes. This well is identified in WPCP NEV2007101, under Part I.D.1 as "Make-up Supply Well" and will be monitored for water chemistry (Profile I constituents) and elevation on a quarterly basis.

<u>GBRW Comment #2</u>: "NDEP should require the company to design channels that will allow run off to bypass the waste rock dumps and not enter the pits. The design must be sufficient to essentially last in perpetuity. The minimum design storm return interval should be 100 years."

<u>NDEP Response</u>: Flow calculations and engineered designs for stormwater diversion structures at the Reward-2 Project site were included in the Permit application submittal and were available for review during the public comment period. The structures were determined to meet the NDEP 100-year, 24-hour storm event design criteria <u>and</u> are required to be in place and functioning prior to the commencement of operations at Reward-2.

At those locations upgradient of the pits that have steep topography and where diversion construction is not possible, berms will be placed along the upper pit perimeters where possible to prevent run-on. Haul roads leading from the pits will be bermed as well and these roads will serve the additional purpose of diverting storm water run-on. Waste rock dumps are situated downgradient of the open pits and will have the same stormwater protection as the pits.

<u>GBRW Comment #3</u>: "More than six vadose zone lysimeters will be necessary to determine whether seepage may be leaving the site."

<u>NDEP Response</u>: The installation and operation of vadose zone lysimeters was addressed in Canyon's response to BMRR's technical comments (Letter dated July 20, 2007) which was available for review during the public comment period.

Given the significant depth to groundwater at the Reward-2 Project site, monitoring wells installed at deeper depths will not provide detection of process fluids in a timely manner. Taking this into consideration, Golder Associates Inc. (Golder) evaluated on behalf of Canyon, a variety of vadose monitoring systems (suction lysimeters, trench-type pan lysimeters, thermocouples, electronic reflectometers, and water flux meters) during the design phase of the Reward-2 Project. Suction lysimeters were selected based on their relative ease of installation, simplicity of design, ability to collect a physical sample and a positive performance record over a period of 10+ years at Canyon's CR Briggs mine in Trona, California. If any solution is detected in a lysimeter, a physical sample can be taken and confirmatory analyses can be performed in a very short time period, providing quick response times to any liner system problems.

In their evaluation Golder determined that a total of 6 lysimeters (one located beneath each of the three pond sumps and the other three near the toe of the leach pad in the areas of concentrated solution flow) would provide adequate downgradient monitoring.

BMRR concurred with Golder's findings and agreed that the installation and operation of 6 vadose zone lysimeters at the selected locations will provide adequate downgradient monitoring. Furthermore, Schedule of Compliance item I.D.2 states that "....should any lysimeter fail during performance testing or under actual operating conditions, the Permittee (Canyon) shall submit, within thirty (30) days, proposed locations for replacement and/or additional lysimeters for

concurrence by the Division (BMRR). The lysimeters must be appropriately installed and capable of monitoring the presence of process fluids in the vadose zone."

<u>GBRW Comment #4</u>: "GBRW recommends that high-density polyethylene be used for all aspects of the heap leach facility."

<u>NDEP Response</u>: Canyon has considerable experience using LLDPE (Linear Low-Density Polyethylene) liner at their CR Briggs Mine in Trona, California, which when compared to the Reward-2 Project site in Beatty, has a comparatively harsher climate. To date, Canyon has been pleased with the long-term performance of LLDPE and has elected to utilize LLDPE as the primary liner for the Reward-2 heap leach pad.

When compared to the more commonly used HDPE, LLDPE has lower resistance to UV radiation. BMRR expressed their concerns regarding the long-term performance of LLDPE and its proposed installation at the Reward-2 Project site in a letter to Canyon dated June 15, 2007. In response, Golder provided on behalf of Canyon, a detailed technical memorandum (dated June 22, 2007) which included an LLDPE liner integrity study, case histories, and performance data comparing LLDPE to other commercially available liner materials in similar applications. This memorandum was available for review during the public comment period.

BMRR concurred with Golder's findings, but will limit LLDPE installation to those areas where exposure to UV radiation is at minimum. For those areas where exposure to UV radiation cannot be avoided, such as ponds and trenches, HDPE will be installed or as in the case of the heap leach pad, a 12-inch layer of liner cover material will be extended over the outside berms of the pad to prevent the LLDPE from being exposed.

<u>GBRW Comment #5</u>: "GBRW also notes mention of backfilling the Gold Ace Pit1, which we see as a good procedure for this mine site."

NDEP Response: Comment noted.